MARKETING ON HOLD

muzak

www.muzakvoice.com

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User's Manual

Version 1.0   Revised 11/5/2003

Doc 99-20-077MZK - $25

General Safety Instructions

Always follow these basic safety precautions when using the system:

1. Read carefully and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. DO NOT block or cover ventilation slots and openings.
4. DO NOT place the product in a closed enclosure or cabinet unless proper ventilation is provided.
5. Never spill liquid on the product or drop objects into the ventilation slots and openings. Doing so my result in serious damage to the components.
6. Repair or service must be performed by a factory authorized repair facility.
7. DO NOT staple or otherwise attach the power supply cord to building surface.
8. DO NOT use the product near or in wet or damp places, such as wet basements.
9. DO NOT use extension cord. Install within 6 feet of a grounded outlet receptacle.
10. DO NOT install during lightning storm.
11. Never touch un-insulated wires or terminals unless the unit is disconnected from both power and the rest of the phone system.
12. Use Caution when installing or modifying configuration switches or control lines.
13. Install in a protected location where no one can step on, or trip over, power and line cords.
14. The unit must be securely attached to a wall board, rack or table mounted.
15. Use correct power source. Use only the power pack supplied.

CAUTION: If any wiring from the system leaves the building premises, you must use proper electrical protectors.

Regulations:

FCC (Part 15) Radio Frequency Interference

The DV-2681 generates and uses radio frequency energy and if not installed and used in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. Unit complies with the limits for Class A devices in accordance with the specifications in Subpart J of Part 15 of the FCC Rules. This testing is designed to provide reasonable protection against such interference. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the unit off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the radio or TV receiving antenna.
- Relocate the unit with respect to the radio or TV receiver or vice-versa.
- Plug the unit into a different outlet so that it and the radio or TV receiver are on different branch Circuits
- If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

Table of Contents

Shipping Container Contents

The following items should be found in the container of the DV-2681System.

DV-2681 System
Wall mount power pack
Audio cables
Mounting hardware
User's manual

1. OVERVIEW:

1.1. Features and Benefits:

The DV-2681 is a highly reliable audio playback system specifically designed for Message-On-Hold applications. Message material is loaded into the system by cassette and stored in non-volatile FLASH memory. Messages play continuously from memory until a new message is loaded.

The DV-2681 is designed to interface with the Message-On-Hold port of a wide variety of phone systems. This allows your marketing messages to Wbe played to customers while they are on hold, reducing hang ups and increasing sales.

DV-2681 incorporates a ruggedized cassette mechanism and non-volatile FLASH memory for unsurpassed reliability. The cassette mechanism was originally designed for automotive applications and is intended for years of reliable service. FLASH memory means that your messages remain in tact in the event of a brown out or power loss, without battery backup.

Multiple audio outputs with level control, Aphex® and high quality sampling allow the sound of the DV-2681 to be optimized to almost any phone system, insuring that the message gets heard.

1.2. General Specifications

Memory:	
Type:	Non-Volatile FLASH
Capacity:	8 minutes
Audio Fidelity:	
Frequency:	100Hz – 6.8kHz
Signal to Noise:	60dB
Power:	12VDC(power pack)
Audio Outputs:	
Line:	RCA, mono, 600 ohm
Amplified:	RCA, mono, 2W @ 8ohm
Manual Controls:	Aphex Mix, Output Volume, Eject, Speaker Enable
LED Indicators:	Tape Ejected, Recording, M-O-H
Package:	Painted steel chassis

2. INSTALLATION:

This section provides complete instructions for mounting the DV-2681. Before you install the DV-2681 system, make sure you have:

-A message or music on hold input connection/jack on your phone system.
-A non-switchable 110VAC electrical outlet near the location where the unit is to be installed.

2.1. Wall or Table Installation:

1. Locate a proper space on the telephone equipment board or wall (see Figure 1). You can mount the DV-2681 unit in one of three positions: flat, side, or horizontal. See illustration below.

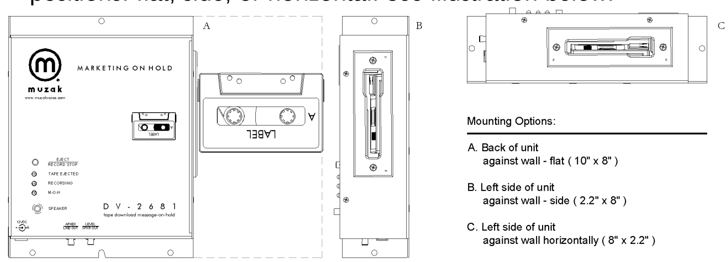


Figure 1

2. Position the unit on the board; mark the mounting hole locations
3. Using the mounting screws provided, secure the DV-2681 system to the board or wall.
4. If table top mounting the DV-2681, stick the enclosed rubber feet on the bottom of the unit.

2.2. Connecting Power:

1. Plug the power pack into a 110VAC power outlet which is not connected to a switch.
2. Plug the power jack into the DV-2681 system's power plug marked 12VDC.
3. There is no power switch on the DV-2681 system, so as soon as power is connected, the system will be active.

2.3. Connection to Telephone Equipment (Figure 2):

1. Connect one side of the supplied RCA cable to the telephone equipment's Message-On-Hold input. Connect the other side of this cable to the DV-2681's LINE OUT. There are two audio outputs on the DV-2681, LINE OUT(Low, +4dB into 600 ohms), and SPKR OUT(High, 2W into 8 ohms). Use the LINE OUT first adjusting the audio output volume potentiometer to obtain the correct audio level. If this does not provide enough audio level, then switch to the SPKR OUT.

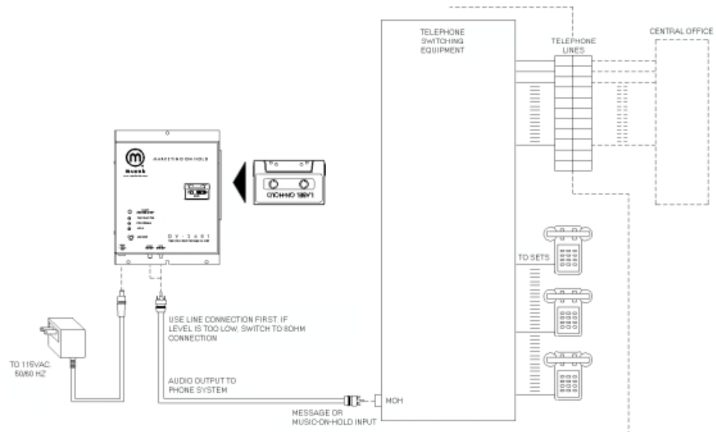


Figure 2

3. Operation:

3.1. Message Downloading:

To load a new message into the DV-2681's memory, simply insert a recorded cassette(Tape Up, Facing Label).

When a new tape is inserted, the DV-2681 will automatically rewind the cassette to the beginning and then start playing it. The DV-2681 will record the audio program, ignoring the silence before and after the audio recorded on the cassette. When the audio program on the tape starts, the red Record light will come on signifying that audio is being recorded to memory. At the end of the audio program, when the DV-2681 detects 5 seconds of silence, the recording will end, the Record LED will go out, and the system will automatically rewind the cassette tape. The 5 seconds of silence will be deleted prior to playing the message.

The audio being recorded will be output through the LINE and SPKR outputs during the recording process. This audio may also be monitored by the user, by pressing the "Speaker" button.

Warning: When a tape is inserted into the DV-2681 system, the previous recording is deleted immediately. If the tape is then ejected, prior to recording any audio, the DV-2681's memory will be empty.

3.2. Message Playback:

After a message has been recorded into memory, the DV-2681 will automatically begin playing this message through the audio outputs. The green M-O-H LED, will illuminate whenever a pre-recorded message is playing.

EJECT / RECORD STOP PUSH-BUTTON:
This ejects the tape when the system is playing a message. If pressed during the recording process the recording will be stopped.

TAPE EJECTED LED:
Yellow light on indicates there is no cassette inserted. Insert cassette, yellow light off = cassette in place, will start memory loading.

RECORDING LED:
Used to determine tape loading mode. Red light on, indicates message (s) is being loaded into memory

M-O-H LED:
This green LED is on when the system is playing a Pre-Recorded message.

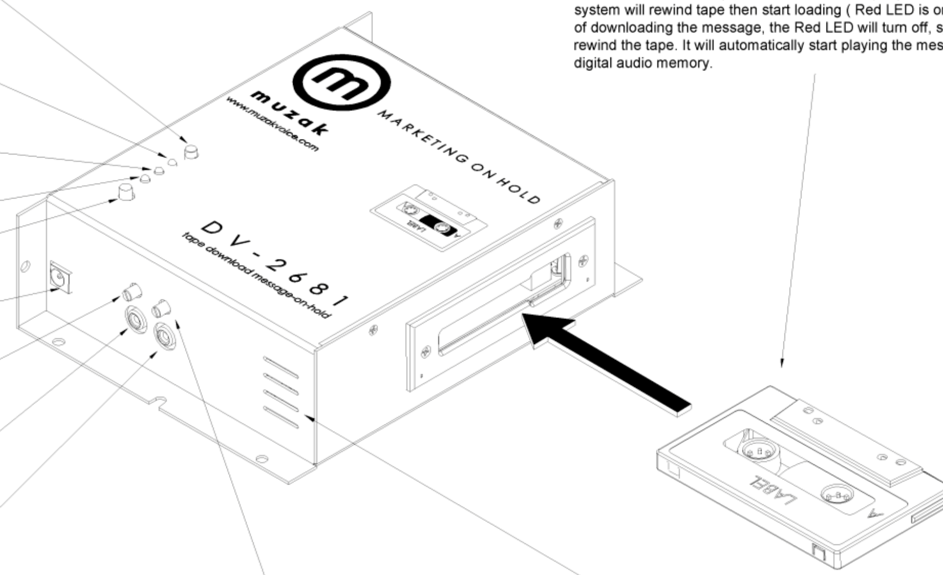
SPEAKER PUSH-BUTTON:
Local Monitor ON/OFF

POWER:
Insert power adapter supplied.

APHEX:
Adjusts the amount of high frequency enhancement necessary to deliver the best overall system performance.

LINE OUT:
Audio output level at of to +4dB into 600 Ω, this is a standard level for most applications.

SPKR OUT:
Audio output level at up to 1.5W into 8 Ω use this output if more drive is needed to reach a more comfortable listening level.



LEVEL:
Adjusts the volume to the line level or power audio outputs.

Monitor Speaker

NOTE:
It is recommended That you leave the Cassette Tape in the system for auto download operation.
Insert Pre-Recorded tape Cassette as shown (Tape Label, Facing Up), system will rewind tape then start loading (Red LED is on) at the end of downloading the message, the Red LED will turn off, system will rewind the tape. It will automatically start playing the message from the digital audio memory.

3.3. Eject / Record Stop Pushbutton

A momentary pushbutton, red in color. This button allows the user to stop the recording process, and/or eject the tape.

1. When the system is not recording, the button functions as an Eject button.
2. When the DV-2681 is recording audio, (whenever the Record LED is on) pressing this button momentarily will stop the recording and save the audio which was just recorded. The system will rewind the tape, but not eject it.
3. If the button is pressed momentarily while the DV-2681 is recording audio, and then pressed momentarily again, the system will stop the recording process, save the audio just recorded, and eject the cassette tape.
4. If this button is pressed and held for two seconds while the DV-2681 is recording, the audio just recorded will be deleted, and the tape will be ejected without being rewound.

3.4. Speaker pushbutton

A locking pushbutton, black in color, which controls the monitor speaker located on the front of the unit. Pressing this button will activate the monitor speaker, allowing the local user to hear the audio being output by the DV-2681. Releasing the button will deactivate the monitor speaker.

The volume of the monitor speaker is determined by the volume setting of the audio output. If the phone system requires a particularly low level from the DV-2681, the volume of the monitor speaker will also be low.

Note: Do not adjust the audio output level adjustment in order to hear the monitor speaker level better. Doing this will adjust the level of the Message-On-Hold output which may not be acceptable.

3.5. LED (Light Emitting Diodes) Descriptions

Three LEDs are provided on the top of the DV-2681 unit to display the current status of the system.

Eject LED
This yellow LED will light whenever there is no tape inside the system. When a tape is inserted, and loaded into the machine, this LED will go out.

Record LED
This red LED will light when the DV-2681 starts recording an audio program, and will go out when the recording process stops. The Record LED will blink one time when the DV-2681 is powered on, indicating that the memory is operational.

MOH LED
This green LED will light when the DV-2681 is playing a previously recorded message.

3.6. Audio Adjustments

There are two potentiometers on the DV-2681 system allowing the user to tailor the audio output level and high frequency response. These potentiometers are located on the front side of the device directly above the audio output connectors.

3.6.1. Audio level

The level of both the LINE OUT and SPKR OUT are simultaneously adjusted using the audio level adjustment potentiometer. Turning this potentiometer counter clockwise will lower the audio level. Turning this potentiometer clockwise will raise the audio level.

3.6.2. Aphex®

This special, psycho-acoustic processing extends the high frequency response of the DV-2681. Turning this potentiometer clockwise amplifies the high frequencies while turning it counter clockwise attenuates the high frequencies.

3.7. Connections

There are several connectors on the front side of the device.

<u>DC Power</u>
2.5mm Barrel connector. The system is powered by 12VDC. Use only the AC-DC power adapter supplied by the manufacturer to guarantee proper operation.

<u>Line Level Audio Output(LINE OUT)</u>
RCA connector. A 600 ohm, transformer isolated, audio output. When installing the DV-2681 system, connect this output to the phone system first.

<u>Amplified Audio Output(SPKR OUT)</u>
RCA connector. An amplified, 2 watt into 8 ohm, audio output. Use this audio output if the audio from the Line output can't drive the on-hold circuit to a high enough level.

4. POWER FAILURE RECOVERY

The DV-2681 uses FLASH memory which is not dependent upon power or battery backup to retain its memory. This eliminates problems associated with brown outs or unexpected power losses. When power is returned, the system will immediately start the operation it was in prior to power being removed.

5. TROUBLESHOOTING GUIDE

No LEDs are active on the DV-2681.

- Just after a tape is inserted, and before audio is detected by the DV-2681, all LEDs will be off.
- Verify that the AC-DC power adapter is plugged into non-switched AC power outlet.
- Verify that the power connector is plugged completely into the jack on the DV-2681.

The system will not mechanically load the tape into the system

- Push the cassette tape completely into the DV-2681.
- Verify that the AC-DC power adapter is plugged into non-switched AC power outlet.
- Verify that the power connector is plugged completely into the jack on the DV-2681.

The Record LED never comes on after the cassette tape is loaded into the system

- Verify that the tape was inserted right side up.
- If the tape is blank, the Record LED will never come on.
- Verify that the nominal level of the audio recorded on the tape is over -20dB.

After recording the tape, the tape ejected, and the system is not playing a message.

- If the user pressed, and held the Eject/Record Stop button during the record, the system will eject the tape immediately and delete the recorded audio.
- Verify that the tape was inserted with the audio recorded side facing side up.
- If there is no audio on the tape, it will eject it automatically when it reaches the end of the tape.

Cannot hear anything through the on-hold circuit

- If both Record and MOH LEDs are off, there is no audio being output by the system.
- Verify that the RCA to RCA connector is securely attached to the DV-2681 and the phone system.
- Turn the output level adjustment clockwise to increase the audio output level.
- Use the 8 ohm output instead of the line level output.

Cannot hear anything through the monitor speaker

- If both Record and MOH LEDs are off, there is no audio being output by the system.
- Press the Speaker button so that it locks in the depressed position.
- If the level of the audio output is adjusted very low, the level from the monitor speaker will also be very low.

6. WARRANTY, SERVICE & RETURNS

The industrial grade housing and quality construction of the DV-2681 virtually eliminates the need for service or maintenance. There are no user-serviceable components within the DV-2681. Refer all servicing to the manufacturer.

6.1. Warranty Coverage:

The DV-2681 is tested and checked before shipment and are guaranteed against defective material or workmanship for a period of five(5) years from the date of purchase. Should trouble ever develop, contact the Factory directly by telephone or in writing. If it is determined that the equipment requires Factory service, return it to the Factory. If our inspection shows that the trouble was caused by defective material or workmanship, we will repair or replace the equipment without charge and return prepaid. Repairs made necessary by abuse, improper use, unauthorized service or maintenance, and/or improper installation, as well as out of warranty repairs, will be charged at our regular repair prices in effect at the time. The obligation under this warranty shall be limited to the replacement, repair or refund of any such defective device within the warranty period. This warranty is in lieu of and excludes all other warranties, expressed or implied, and in no event shall the factory be responsible for damage to other equipment or property, for any anticipated profits, consequential damages, loss of item, or other operation or use of this product, and the factory's maximum liability shall not ever be greater than the price paid for the equipment. This warranty gives you specific legal right. Your rights may vary from state to state. Inquiries regarding use, repair and service should be made to:

MACKENZIE LABORATORIES, INC.
1163 Nicole Court, Glendora, CA 91740 USA
Telephone: (909) 394-9007; FAX No: (909) 394-9411
Email: info@macklabs.com; WWW: www.macklabs.com

6.2. What we ask you to do:

To get warranty service for your DV-2681 system, you must provide proof of the date of original purchase. In the event you need to ship your DV-2681 system to the factory for service, call us for a return authorization number. When you ship your DV-2681 system, you must prepay all shipping cost. We suggest that you retain your original packing material in the event that you need to ship your DV-2681 system. When sending your DV-2681 system to the factory, include the return authorization number, your name, address, phone number, proof of date of purchase, and a description of the operating problem. After repairing or replacing your DV-2681 system, we will ship it to your return address at no cost to you within the USA. Repair or replacement of your DV-2681 system at our factory is your exclusive remedy.

6.3. What this warranty does not cover:

This warranty does not cover defects resulting from accidents, damage while in transit to factory, alterations, unauthorized repairs, failure to follow instructions, misuse, fire, flood, and acts of God.

NOTES

Warranty & Registration Card for the
DV-2681 - tape download message-on-hold system

Date: ____________________ Serial No.: ________________________

Purchaser: ____

Address: ____

City: ____________________ State: ______ Zip: _______________

Phone: ____________________ Fax: ____________ Email: _____________

Seller: ____

Address: ____

City: ____________________ State: ______ Zip: _______________

Phone: ____________________ Fax: ____________ Email: _____________

Return warranty card via fax to (909) 394-9411 or mail to:
Mackenzie Laboratories Inc., 1163 Nicole Court, Glendora, CA 91740 USA.

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Return Address

Mackenzie Laboratories, Inc.
1163 Nicole Court
Glendora, CA 91740 USA

Mackenzie Product Lines

Message On Hold & Storecasting - Mackenzie's full line of digital Message-On-Hold systems, turn your telephone into a powerful marketing tool. The DYNAVOX series offers maintenance free digital playback with tape, modem or satellite download. Several varieties are available with advanced features such as Music-Thru, individual message enable/disable, message sequencing and more.

Digital Message Repeaters - Mackenzie's line of Digital Message repeaters are the .ideal audio and video solutions for Information, Amusement, Entertainment, Museum and Exhibit applications. Self contained solid state systems offer unparalleled reliability. A variety of channel, connection, bandwidth and memory configurations are available.

Fire Alarm & Life Safety - Mackenzie's line of Fire Alarm and Life Safety Digital Message Repeaters offer advanced features and unsurpassed reliability. These products offer the maintenance free operation of digital playback and are UL compliant for Life Safety with self test and full supervision. Large memory capacity, random access, multiple channel and field recording/programming are available.

Page Stacker / Feedback Eliminator - Mackenzie's FE series of Digital Page Stacker/Repeater and Feedback Eliminators offer advanced features for the most difficult paging and intercom applications. A unique design makes feedback virtually impossible by recording then repeating pages which opens the loop between the input microphone and speakers. Various models are available to support simple repetition, multiple page stacking and multiple input channels.

Transit - Mackenzie is making a difference in transit applications with innovative solutions for ADA compliance and Passenger Information Systems. These products address a variety of audio and text messaging requirements and support both in-vehicle and wayside installations.